IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
Before the Board of Patent Appeals and Interferences

Inventor(s)	:	Shaily Verma et al.
Serial No.	:	10/517,466
Filed	:	6 December 2004
Title	:	INTERFACING A WLAN WITH A MOBILE COMMUNICATIONS SYSTEM
Examiner	:	Simon Nguyen
Art Unit	:	2618

APPEAL BRIEF

Mail Stop: Appeal Brief – Patents
Commissioner for Patents
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May It Please The Honorable Board:

This is responsive to the Office communication dated 7 May 2009, finally rejecting Claims 1-18. The Appellants waive an oral hearing for this appeal.

Please charge any additional fee, or credit any overpayment, to Deposit Account No. 07-0832. Enclosed is a single copy of the Brief.

I. REAL PARTY IN INTEREST

The real party in interest of Application Serial No. 10/518996 is the Assignee of record:

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II. RELATED APPEALS AND INTERFERENCES

There are currently, and have been, no related Appeals or Interferences regarding Application Serial No. 10/517,466, known to the undersigned attorney.

III. STATUS OF THE CLAIMS

Claims 1-18 have been rejected. The rejection of all of these Claims is appealed.

IV. STATUS OF AMENDMENTS

All amendments were entered and are reflected in the Claims included in Appendix I.

V. SUMMARY OF CLAIMED SUBJECT MATTER

Independent Claim 1 claims an interface for connecting networks, comprising:

an interworking function (25; page 5, lines 18-19) provided between a wireless local area network (WLAN) (14; page 5, line 20) and a public mobile land network (PLMN) (12; page 5, line 17) to provide communication interactions between the public mobile land network and the wireless local area network;

the interworking function further comprising a dual-protocol stack (Figures 2 and 3; page 6, line 9) which interfaces the wireless local area network protocols and public mobile land network protocols (page 6, lines 10-12) to provide seamless communications between the wireless local area network and the public mobile land network such that an increase in available service bandwidth provided for users of the public mobile land network is maintained; and

means (page 9, lines 5-10) for detecting user movement between a coverage area of said wireless local area network and a coverage area of said public mobile land network by comparing a first routing area identifier (RAI)

associated with said public mobile land network and a second routing area identifier (RAI) associated with said wireless local area network.

Independent Claim 14 claims a method for interfacing two wireless networks, comprising the steps of:

connecting a wireless local area network (WLAN) (14; page 5, line 20) to a universal mobile telecommunications system (UMTS) network (12; page 5, line 17) through an intra public mobile land network (PLMN) interface (page 5, lines 8-9)and

interfacing the wireless local area network to the universal mobile telecommunications system network by providing interfaces towards the universal mobile telecommunications system and the wireless local area network using an interworking function (25; page 5, line 22) such that communications received from the wireless local area network appear to be from a different serving general packet radio service (GPRS) support node (SGSN) and communications sent to the wireless local area network appear to be from within the wireless local area network (page 3, lines 14-17), and

detecting user movement between a coverage area of said wireless local area network and a coverage area of said public mobile land network by comparing a first routing area identifier (RAI) associated with said public mobile land network and a second routing area identifier (RAI) associated with said wireless local area network (page 9, lines 7-10).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The Examiner has rejected Claims 1-18 under 35 USC 103 (a) as unpatentable over US 2006/0291455 to Katz et al in view of US 6,661,782 to Mustajärvi et al.

VII. ARGUMENT

This invention relates to a method and apparatus for interfacing a wireless local area network to a public land mobile network or to a universal mobile telecommunications system. Nowhere is this invention shown or

suggested by Katz et al or Mustajärvi et al, taken either singly or in combination. Nowhere does either Katz et al or Mustajärvi et al show or suggest:

"detecting user movement between a coverage area of said wireless local area network and a coverage area of said public mobile land network by comparing a first routing area identifier (RAI) associated with said public mobile land network and a second routing area identifier (RAI) associated with said wireless local area network",

as specifically set forth in Claims 1 and 14. The Examiner admits that this concept is not shown or suggested in Katz et al, but has asserted that it is shown in Mustajärvi et al. The Appellants can not agree with the Examiner's analysis.

Mustajärvi et al specifically sets forth, in column 4, lines 26-29,

"The MS (mobile station) detects that it has entered a new cell by comparing cyclically the cell identity (Cell ID) which is stored in its MM (mobility management) context with the cell identity which is received from the network. Correspondingly, the MS detects that it has entered a new routing area RA by comparing the routing area identifier stored in its MM context with the routing area identifier received from the network".

It is therefore clear that Mustajärvi et al detects user movement by comparing the cell identity stored in its memory with the cell identity received from the network, not by comparing a first routing area identifier associated with a public mobile land network with a second routing area identifier associated with a wireless local area network, as set forth in Claims 1 and 14. Once user movement is detected by Mustajärvi et al, a new routing area is stored in the MM context.

Nowhere does Mustajärvi et al show or suggest detecting user movement between a coverage area of a wireless local area network and a coverage area of a public mobile land network by comparing a first routing area identifier (RAI) associated with said public mobile land network and a second routing area identifier (RAI) associated with said wireless local area network. It is therefore clear that Mustajärvi et al does not affect the patentability of either Claim 1 or Claim 14.

Since the Examiner has admitted that Katz et al does not show this feature of the invention, the Appellants have not further discussed Katz et al.

Claims 2-13 are dependent from Claim 1 and add further advantageous features. The Appellants submit that these subclaims are patentable as their parent Claim 1.

Similarly, Claims 15-18 are dependent from Claim 14 and add further advantageous features. The Appellants submit that these subclaims are patentable as their parent Claim 14.

VIII. CONCLUSION

Since neither of the cited references, taken either separately or in combination, affect the patentability of either of independent Claims 1 and 14, or dependent Claims 2-13 and 15-18, the Appellants submit that the rejection of all Claims should be reversed.

Respectfully submitted,
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Attachments: Appendixes I, II, III

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September 8, 2009

APPENDIX I APPEALED CLAIMS

1. An interface for connecting networks, comprising:

an interworking function provided between a wireless local area network (WLAN) and a public mobile land network (PLMN) to provide communication interactions between the public mobile land network and the wireless local area network;

the interworking function further comprising a dual-protocol stack which interfaces the wireless local area network protocols and public mobile land network protocols to provide seamless communications between the wireless local area network and the public mobile land network such that an increase in available service bandwidth provided for users of the public mobile land network is maintained; and;

means for detecting user movement between a coverage area of said wireless local area network and a coverage area of said public mobile land network by comparing a first routing area identifier (RAI) associated with said public mobile land network and a second routing area identifier (RAI) associated with said wireless local area network.

2. The interface as recited in claim 1, wherein the interworking function is present within the wireless local area network.

3. The interface as recited in claim 1, wherein the public mobile land network includes one of a universal mobile telecommunications system (UMTS) and a general packet radio service (GPRS) system.

4. The interface as recited in claim 1, wherein the interworking function communicates between the wireless local area network and the public mobile land network through a Gn interface.

5. The interface as recited in claim 1, wherein the seamless communications include protocol compatibility between the wireless local area network and the public mobile land network.

6. The interface as recited in claim 1, wherein the interworking function functions as

a logical serving general packet radio service (GPRS) support node (SGSN).

7. The interface as recited in claim 6, wherein the interworking function is viewed by the public mobile land network as a logical serving general packet radio service support node within its own network.

8. The interface as recited in claim 6, wherein the interworking function is viewed as a node within the wireless local area network by the wireless local area network when receiving information from the public mobile land network.

9. The interface as recited in claim 1, wherein the interworking function is coupled to a gateway general packet radio service support node (GGSN) via a gateway tunneling protocol (GTP) tunnel.

10. The interface as recited in claim 1, wherein the protocol stack includes a user plane stack.

11. The interface as recited in claim 1, wherein the protocol stack includes a control plane stack.

12. The interface as recited in claim 1, wherein the public mobile land network includes session management general packet radio service mobility management (GMM) procedures which are reused in the wireless local area network due to the use of an adaptation layer in a mobile dual-protocol stack and in the interworking function to wireless local area network interface to mimic the functionality of a radio resource control (RRC) protocol sublayer.

13. The interface as recited in claim 1, wherein the wireless local area network works with any serving general packet radio service (GPRS) or code division multiple access (CDMA) system.

14. A method for interfacing two wireless networks, comprising the steps of:
connecting a wireless local area network (WLAN) to a universal mobile

telecommunications system (UMTS) network through an intra public mobile land network (PLMN) interface; and

interfacing the wireless local area network to the universal mobile telecommunications system network by providing interfaces towards the universal mobile telecommunications system and the wireless local area network using an interworking function such that communications received from the wireless local area network appear to be from a different serving general packet radio service (GPRS) support node (SGSN) and communications sent to the wireless local area network appear to be from within the wireless local area network, and

detecting user movement between a coverage area of said wireless local area network and a coverage area of said public mobile land network by comparing a first routing area identifier (RAI) associated with said public mobile land network and a second routing area identifier (RAI) associated with said wireless local area network.

15. The method as recited in claim 14, wherein the interworking function communicates with a serving general packet radio service (GPRS) support node (SGSN) of the universal mobile telecommunications system network through a Gn interface.

16. The method as recited in claim 14, wherein the interworking function creates seamless interactions between the universal mobile telecommunications system network and wireless local area network by ensuring protocol compatibility between the wireless local area network and the universal mobile telecommunications system network.

17. The method as recited in claim 14, wherein the interworking function functions as a logical serving general packet radio service (GPRS) support node (SGSN).

18. The method as recited in claim 14, further comprising the step of viewing the interworking function as a logical serving general packet radio service support node from a same public mobile land network.

APPENDIX II EVIDENCE

None.

APPENDIX III RELATED PROCEEDINGS

None.